

A DAY ON THE WHITE MOUNTAIN

By DR. C. J. LUCKENS*

Out of the forest fleece of northern New England the White Mountains rise to their highest point among the jumbled boulders of Mount Washington. These ancient weathered mountains hold two butterflies found nowhere else in eastern U.S.A. — *Oeneis melissa semidea* Say, the White Mountain butterfly and *Clossiana titania montinus* Scudder, the White Mountain Fritillary. Though both insects are represented elsewhere in America, in the Rockies and the far north, (*titania* is, of course, holarctic) the populations in the White Mountains have been isolated for millenia and have produced two very distinct races.

In early July 1981, while staying with my wife's family on Martha's Vineyard Island, Massachusetts, I had the opportunity to visit this area. Leaving early in the morning I travelled by ferry and coach to Portland, Maine, where I picked up a hired car and soon found myself driving through the rolling forested country N. W. of the city. There had been a heat wave for several days in the eastern states and this continued, in the lowlands at least, throughout my trip.

Just beyond Gorham I glimpsed an open wooded path leading off from the main road towards a stream and decided to stop to see what might be flying in the afternoon sun. The first butterfly to appear was a *Nymphalis antiopa* L., flying around a patch of milkweed at the path entrance and this was soon joined by two or three of the large fritillary *Speyeria cybele* Fab. The *antiopa* had probably developed on a neighbouring elm as the leaves of several benches had been stripped to the midrib and there were remnants of shed larval skins. Broods of these black, spiny, crimson-spotted caterpillars were a feature of our visit to the States that year and I had already reared a large number of imagines from colonies found on *Salix* and elm on Martha's Vineyard. On this particular elm tree I collected a full grown larva of one of the Comma butterflies that the Americans appropriately call "Angle-wings" — the largest member of this genus in N. America in fact — *Polygonia interrogationis* Fab. Then, as I stood searching the elm leaves, a magnificent white-barred butterfly floated down and settled on a bush in front of me. This was *Limenitis arthemis* Drury, a species typical of the northern woods, and one I had long wished to see. Unfortunately nearly all the specimens netted during the trip were disappointingly chipped and this one was no exception.

Before leaving I took a male *Celestrina argiolous pseudargiolous* Boisd. & Le. C. from among the numerous examples present and also two yellowish skippers. These latter specimens turned out

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to be *Atrytone delaware* Edwards. The reference books state that the range of this skipper extends only to Massachusetts in the eastern states. I drove on to Cornish where I spent the night in a hotel otherwise empty of visitors.

The heat was already intense the next day as I drove in the bright morning sun through the Maine Woods. I inspected a 'White' fluttering beside the road hoping for the indigenous American form of *Pieris napi* L., but it was merely the alien *P. rapae* L. A little further on between Brownfield and the New Hampshire border I stopped at a rough, bushy meadow full of Fritillaries and *Colias* with a sprinkling of *N. antiopa* and *L. arthemis*. I netted a worn 1st brood *Limenitis archippus* Cram. (the butterfly that mimics the Monarch), and there were good numbers of *Cercyonis pegala* Fab. intermediate between the yellow-marked ssp. *maritima* Edw. of southern New England and the nearly unicolorous, northern ssp. *nephele* Kirby. This Satyrid butterfly exhibits a steep cline, as in Martha's Vineyard and throughout southern New England *maritima* occurs, whereas only two hundred miles north in coastal Maine it is entirely replaced by *nephele* in which the yellow patches have disappeared.

I watched a Mourning Cloak flying in the dappled sunlight of the forest edge where tree-stumps jutted. Suddenly a large tawny butterfly flitted out in challenge and then resettled on one of the cut trunks. I realised I was looking at a fresh *Nymphalis Vau-album* D. & S., its foxy-brown golden haired wings spread in the sun. It was inevitable that I should miss this highly desirable butterfly on its irregular tree stump but a few minutes later another *Vau-album* settled in the road before me and was easily captured. Two specimens were spotted flying furtively around a shady culvert below the road. I descended the bank to investigate and found four *Vau-album* and two *Polygonia faunus* Edwards sheltering within the drainage pipe.

A few hundred yards further along the forest road was a layby of packed earth and stones surrounded by trees on three sides and outposted by two large dead beeches. Settled on damp spots on this partially shaded area and flying around the trees were no less than 11 *Vau-album*, two *antiopa* and a *Polygonia faunus*. There is an indelible picture in my memory of that assembly of butterflies in the extraordinary heat of the northern forest — the dark, closed wings of the great *Nymphalids*, their yellow probosces extended for moisture under the pebbles, the silence of that still morning broken only by the hum of insects and the occasional drum of a Woodpecker or rasping screech of a Blue Jay.

Reluctantly I left this locality, driving through the sunlit woods to Conway, just over the New Hampshire border. A notice outside a breaker's yard here stated baldly "Trespassers will be shot," but the tourist office was a little more friendly, and armed with a large

scale map I drove on into the foothills of the White Mountains to the base of Mount Washington itself. Here a Forest Ranger told me that conditions at the summit were not favourable, with cloud and high winds — very different from those in the sun-filled valley. I decided to find food and lodging nearby therefore, and tackle the mountain the following day.

In the morning prospects looked good and by 9.30 I was exploring the lower slopes of Mount Washington. *Limenitis arthemis* sailed among the aspens and *Papilio glaucus* L. and a large fritillary, *Speyeria atlantis* Edwards were both frequent. Broods of *N. antiopa* were noted on *Salix* bushes — at earlier stages of development as the altitude increased.

Above the tree line I started searching for the two 'target' species. With startling suddenness great banks of mist rolled across from the north and, within minutes, enveloped the whole mountain above 4,000 ft. Disconsolately I made my way to the summit and sat in the observatory restaurant while outside swirled thick, saturating mist and the temperature dropped. After two hours waiting I decided to cut my losses and started down the mountain. Visibility was reduced to a few yards until just above 4,000 ft. where the cloud cover ended abruptly and I re-entered the sunlit world of the lower slopes. *Clossiana titania* was still a possibility here, just below the tree line, but a diligent search failed to reveal it. While talking to a worried motorist whose car had overheated I noticed a *Nymphalis Vau-album* which landed beside us on the ground. A careless movement, the fine butterfly flew off, and I reflected how chagrined I would have been if that had happened two days before!

A glance at the mountain above showed the mist rolling back a little. With high hopes I started upward again, looking constantly for *titania*. For another hour I searched without success and then a brisk N. E. breeze sprang up and the rags of cloud were swept away from the summit. I raced up to a plateau a few hundred feet below the observatory car park and in the weak sunshine suddenly had my first glimpse of one of the butterflies I had come so far to see — *Oeneis melissa semidea*. The pale greyish-brown butterflies flitted up from the tussocks and boulders on a steep S. W. facing slope, occasionally flying over the plateau itself.

Every so often a trailer of cloud would obscure the sun and as soon as this happened they disappeared in the manner of mountain butterflies everywhere. Once or twice, after carefully marking the landing place of *melissa* among the boulders I attempted to capture the insect at rest. On my approach the butterfly did not attempt to fly but with closed wings dropped like a stone into a crevice, and further interference merely caused it to drop deeper into the jumbled rocks. This interesting evasion technique was

described for the species by S. H. Scudder as far back as 1889. A total of perhaps 20 minutes sunshine allowed me to take a small series of these fascinating butterflies before the weather finally closed in again.

In typically friendly American fashion, a waitress at the hotel had taken an interest in my butterfly hunt and on my return that evening she enquired about my search on Mount Washington. She found it hard to conceal her disappointment when I brought out the collecting boxes containing the dullwinged but subtly mottled butterflies. I fear she expected an insect of shining splendour from the highest mountain in the eastern U.S.A.

References

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A LOCAL AND UNUSUAL FORM OF *LOPHOPTERYX CAPUCINA* L.: COXCOMBE PROMINENT. — At Grantown-on Spey, Moray, on July 9th 1984 a number of this species were attracted to m.v. light; they were mainly well marked and of a rich mahogany hue, but one was a pale yellowish brown with only faint markings, and was far paler than any *capucina* I had previously encountered. This specimen was later identified as form *pallida* Gillmer, of which eight specimens reside in the National Collection. Of considerable interest is that all these specimens were from the Highlands of Scotland — Aberdeenshire (3), Perthshire (2), Sutherland (2) and Moray — taken between 1893 and 1938. South was evidently aware of this form, for in *Moths of the British Isles*, (1939) he describes Scottish specimens as 'varying in colour from dusky brown, through reddish to pale yellowish brown.'

The most significant aspects of this pale form are its apparent restricted distribution and that it is in complete contrast with the normal tendency towards melanism in this region, as exemplified by such species as *Phragmatobia fuliginosa* L., *Spilosoma menthastri* Esp. and *Plemyria bicolorata* Hufn. On the other hand this pale form of *capucina* is perhaps paralleled by the pale Highland form of *Drepana falcataria* L. *L. capucina* form *pallida* would seem to be quite rare in the Highlands of Scotland, the region to which it is apparently restricted in Britain. — B. K. WEST, 36 Briar Road, Bexley, Kent.